

WHAT IS CLAIMED

1. A method for enabling a digital communication device to provide call connectivity therethrough of a call, that is coupled to a first port of said digital communication device and has a destination telephone number, to a second port of said digital communication device for delivery to a communication circuit intended to be reached by said destination telephone number, comprising the steps of:

10 (a) providing said digital communication device with a called number substitution mechanism that is operative to automatically selectively modify said destination telephone number;

15 (b) processing said destination telephone number of said call, in accordance with said called number substitution mechanism, and selectively modifying said destination telephone number to the extent necessary to produce an output telephone number that conforms with connectivity requirements for said communication circuit; and

20 (c) coupling said output telephone number to said second port of said digital communication device.

2. The method according to claim 1, wherein said digital communication device comprises an integrated access device.

3. The method according to claim 1, wherein, in step (b), said called number substitution mechanism is operative to compare said destination telephone number with a plurality of potential substitute telephone numbers, and wherein step (c) comprises, in response to one of said plurality of potential substitute telephone numbers satisfying a prescribed relationship with said destination telephone number, coupling said one of said plurality of potential substitute telephone numbers as 10 said output telephone number to said second port of said digital communication device.

4. The method according to claim 1, wherein, in step (b), said called number substitution mechanism is operative to compare said destination telephone number with a plurality of potential substitute telephone numbers, and wherein step (c) comprises, in response to one of said plurality of potential substitute telephone numbers satisfying a prescribed relationship with said destination telephone number, coupling said one of said plurality of potential substitute telephone numbers as 10 said output telephone number to said second port of said digital communication device, but in response to none of said plurality of potential substitute telephone numbers satisfying said prescribed relationship with said destination telephone number, coupling said destination 15 telephone number as said output telephone number to said second port of said digital communication device.

5. The method according to claim 1, wherein, in step (b), said called number substitution mechanism is operative to compare said destination telephone number with a plurality of potential substitute telephone numbers, and wherein step (c) comprises coupling that one of said plurality of potential substitute telephone numbers, which most closely matches said destination telephone number, as said output telephone number to said second port of said digital communication device, but in 10 response to none of said plurality of potential substitute telephone numbers matching said destination telephone number, coupling said destination telephone number as said output telephone number to said second port of said digital communication device.

6. The method according to claim 1, wherein said called number substitution mechanism contains a plurality of potential substitute telephone numbers, and wherein step (c) comprises coupling one of said plurality of 5 potential substitute telephone numbers as said output telephone number to said second port of said digital communication device.

7. The method according to claim 1, wherein said output telephone number has a different number of digits than said destination telephone number.

8. The method according to claim 1, wherein said output telephone number has the same number of digits as said destination telephone number.

9. For use with a communications controller of a digital communication device that is configured to enable a customer of a communication service provider to conduct time division multiplexed and packetized voice and data 5 communications with a digital communications switch of a digital telecommunications network, said communications controller containing a call routing mechanism that provides call connectivity of a call, that is coupled to a first port of said digital communication device and has 10 a destination telephone number, to a second port of said digital communication device for delivery to a communication circuit intended to be reached by said destination telephone number, a called number substitution mechanism comprising:

15 memory containing a plurality of potential substitute telephone numbers; and

a telephone number comparator routine that is operative to compare said destination telephone number with said plurality of potential substitute telephone 20 numbers stored in memory, and selectively modify to the extent necessary to produce an output telephone number that conforms with connectivity requirements for said communication circuit.

10. The called number substitution mechanism according to claim 9, wherein said digital communication device comprises an integrated access device.

11. The called number substitution mechanism according to claim 9, wherein said telephone number comparator routine is operative to cause one of said plurality of potential substitute telephone numbers to be 5 coupled as said output telephone number to said second port of said digital communication device.

12. The called number substitution mechanism according to claim 11, wherein said output telephone has a different number of digits than said destination telephone number.

13. The called number substitution mechanism according to claim 9, wherein said telephone number comparator routine is operative, in response to one of said plurality of potential substitute telephone numbers 5 satisfying a prescribed relationship with said destination telephone number, to cause said one of said plurality of potential substitute telephone numbers to be coupled as said output telephone number to said second port of said digital communication device.

14. The called number substitution mechanism according to claim 9, wherein said telephone number comparator routine is operative, in response to one of said plurality of potential substitute telephone numbers 5 satisfying a prescribed relationship with said destination telephone number, to cause said one of said plurality of potential substitute telephone numbers to be coupled as said output telephone number to said second port of said digital communication device, but in 10 response to none of said plurality of potential substitute telephone numbers satisfying said prescribed relationship with said destination telephone number, to cause said destination telephone number to be coupled as said output telephone number to said second port of said 15 digital communication device.

15. The called number substitution mechanism according to claim 9, wherein said telephone number comparator routine is operative to couple that one of said plurality of potential substitute telephone number 5 which most closely matches said destination telephone number as said output telephone number to said second port of said digital communication device, but in response to none of said plurality of potential substitute telephone numbers matching said destination 10 telephone number, to cause said destination telephone number to be coupled as said output telephone number to said second port of said digital communication device.

16. The called number substitution mechanism according to claim 9, wherein said output telephone number has a different number of digits than said destination telephone number.

17. The called number substitution mechanism according to claim 9, wherein said output telephone number has the same number of digits as said destination telephone number.

18. A telephone number substitution mechanism for use with call-routing software of an integrated access device through which time division multiplexed and packetized voice and data services are supplied, and
5 being configured to automatically modify an original telephone number of a call to an input port of said integrated access device as necessary to conform with the connectivity requirements of a communication link from an output port of said integrated access device to a called
10 telecommunication circuit.

19. The telephone number substitution mechanism according to claim 18, and comprising memory containing a plurality of potential substitute telephone numbers, and a telephone number comparator routine for said call-
5 routing software and being operative to compare a destination telephone number of said call with said

plurality of potential substitute telephone numbers stored in memory, and to selectively modify said destination telephone number to the extent necessary to 10 produce an output telephone number at said output port that conforms with connectivity requirements for said telecommunication circuit.

20. The telephone number substitution mechanism according to claim 18, wherein said telephone number comparator routine is operative to cause one of said plurality of potential substitute telephone numbers to be 5 coupled as said output telephone number to said output port.